

ORIGINAL ARTICLE

Knowledge, attitudes, and practices in reproductive and sexual health

Valle de los Chillos, Rumiñahui County, Province of Pichincha,
Ecuador

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ABSTRACT: To help support and direct the Lions Club's construction of a Community Health Clinic specializing in Reproductive and Sexual Health, this descriptive study began in November of 2004 and was completed in May 2005. The sample consists of 552 high school students in Rumiñahui County, and surveys were used to study four principle themes: reproductive and sexual health education, family planning, sexually transmitted infections, and domestic violence. The results show a widespread lack of accurate and adequate information about reproductive and sexual health. Statistically significant variables studied include sex, age, monthly income, and age of first sexual experience. Female sex, younger age, lower monthly income, and younger age of first sexual experience all contribute to a lower quality of reproductive and sexual health, in terms of having less information about and access to these four aspects of reproductive and sexual health.

KEYWORDS: Reproductive and sexual health; Valle de los Chillos; Ecuador; sexual education; family planning; sexually transmitted infections; domestic violence

INTRODUCTION

Ecuadorians, in general, lack access to adequate information about and care for reproductive and sexual health (RSH) issues. Many authors (1,2) and organizations, including the World Health Organization and United Nations Population Fund confirm this fact (3). For instance, the infant mortality rate for the year 2000 was 45.6 per 1,000 live births (3); the percentage of births attended by health professionals, in the year 2001, was 72.6% (4); and the maternal mortality rate in 2001 dropped to 97 deaths per 100,000 live births (4).

In comparison, most developed countries have both

infant and maternal mortality rates under 10 deaths per 1,000 and 100,000 births, respectively. Among adolescents, 66% of male students possess basic knowledge about RSH, while only 40% of female students do (1); 57% of 10-17 year olds have misinformation about the transmission of HIV and 31% do not know how to prevent it (2); and 33% of adolescent boys and 57% of adolescent girls who have engaged in premarital sex were forced to have their first sexual relationship (1).

In order to improve this situation in a satellite community of Quito, the Lions Club of the Valle de los Chillos acquired funding to build a Community Health Clinic specializing in reproductive and sexual health (RSH). This study defines the RSH situation in this area, focusing on: reproductive and sexual health education, family planning, sexually transmitted

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infections, and domestic violence.

METHODS

Universe and sample populations

The universe consists of high school students in fifth and sixth years (equivalent to juniors and seniors in American high schools) at the 15 high schools functioning in Rumiñahui County in the year 2002 (5). Of the 15 high schools in the county, the following seven were randomly chosen to be included in the sample: Giovanni Antonio Farina, Centro Educativo Integral, *Colegio Nacional Mixto San Rafael*, Unidad Educativa Católica Santa Ana, Unidad Educativa Darío Figueroa, *Colegio Nacional Juan de Salinas*, and *Colegio Nacional Técnico Jacinto Jijón y Caamaño*. Their participation depended on permission from the school administrators and teachers. The sample includes three public schools (italicized) and four private, but does not include any night schools. The public schools are considered "large" for the sake of this study, with over 80 students per grade level. All private schools were considered "small", with class sizes ranging from 20 to 80 students.

Five hundred and fifty-two surveys were completed by fifth and sixth year students, with a maximum of 100 surveys in large schools. In the small schools, all fifth and sixth year students who were present on the day of the study were surveyed. The number of students surveyed ranged from 21 at Santa Ana to 100 at Juan de Salinas and Jacinto Jijón y Caamaño.

Methods and data collection

The data collection consisted of a 34-question survey that lasted approximately 15 minutes. The survey focused on the four themes described earlier in this paper and determined which topics students were further interested in. All answers were exclusive (choose one and only one), with very few students choosing more than one answer. Students were surveyed during classes, with the permission of the teachers and school administrators.

To ensure the reliability of the data collection methods, all surveys were performed by the author in similar conditions. The survey was designed in Spanish by the author, with input from José Terán, pediatrician and Professor of Medicine at the Universidad Católica del Ecuador. For the purpose of receiving further input, the author translated the survey to English and received feedback from Steve Hirsch, Clinical Professor in the Department of Education Leadership and Counseling Psychology; and Anne Hirsch, Associate Dean for Academic Affairs of the Nursing School, both at Washington State University.

Execution

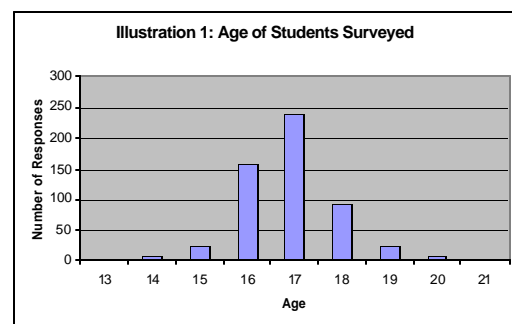
The pilot study, conducted in November of 2004, tested the effectiveness of the instruments and helped identify necessary changes. Finalized surveys were completed in March, April, and May of 2005. The principle difficulty encountered by the author during data collection was the inability to take a completely random sample of the population, due to the necessity of obtaining authorization from high school administrators and teachers. Only administrators sympathetic to the idea of this study permitted the surveys and interviews to be done. Furthermore, given that students were surveyed while in class, and that some classes were taking tests or were out of the classroom, not all eligible students were surveyed.

The biostatistics program EPI-INFO, from the Centers for Disease Control, was utilized in the processing and analysis of data. The statistical tests used to determine significance were Chi squared with the Yates correction or the Fischer exact test, when necessary. All subjects were free to refuse to participate in the study, though no student declined to complete a survey. Each phase of the study was completed with the utmost confidentiality; participants were never asked to provide identifying information.

RESULTS

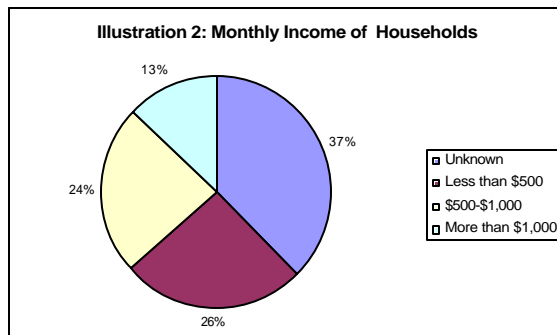
Demographic information

Of the 552 students surveyed, 237 (42.9%) are female and 315 (57.1%) are male. Their average age is 16.86 years, the median and mode is 17 years. See Illustration 1 for details:



As a measure of income, cutoff points of \$500 and \$1,000 (USD) were based on Ecuador's average income of \$250 per person in urban areas, for the year 2002 (6). A household of two earners at the average income would yield a household income of \$500, this study's maximum cutoff for "low" income. More than double this amount (\$1,000) was considered "high" income. Over a third of the students did not know the monthly income of their families. Of those who did, most were considered low income, followed by middle and then

high income families (see Illustration 2).



The majority of these families have four or five people living in the household, with the number of inhabitants ranging from 2 to 13 and averaging 5.04. At the extremes, 9.1% of the students live in a house with three or fewer people and 27.6% live in a household with six or more.

The vast majority (98.2%) of the students are single, while the other 1.8% live in "free union", defined as living together but unmarried. Two hundred five (37.1%) students were in an intimate relationship at the time of the study: 38% of female students and 36.5% of male students. Thirteen students (2.4%), eight male and five female, have children.

Education/information about reproductive and sexual health

The majority of students (60.51%) believe that parents and high schools share the responsibility for their education in reproductive and sexual health matters. The complete answers can be seen in Table 1.

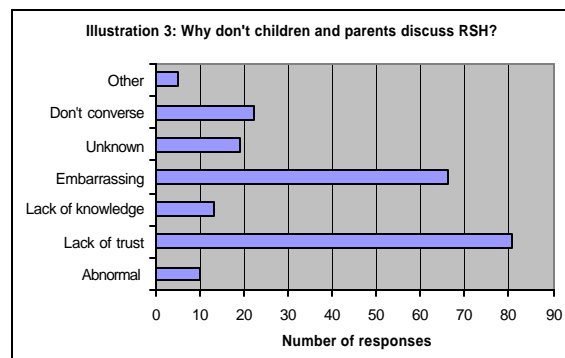
Table 1. Who should be responsible for educating children?

	Number of Responses	Percentage
Friends	2	0.36%
High School	3	0.54%
No one	2	0.36%
Unknown	1	0.18%
Parents	65	11.78%
Parents and High School	334	60.51%
Health Professionals	79	14.31%
Everyone	66	11.96%
Total	552	100.00%

Despite the fact that 334 students believe that parents and high schools should be responsible for RSH

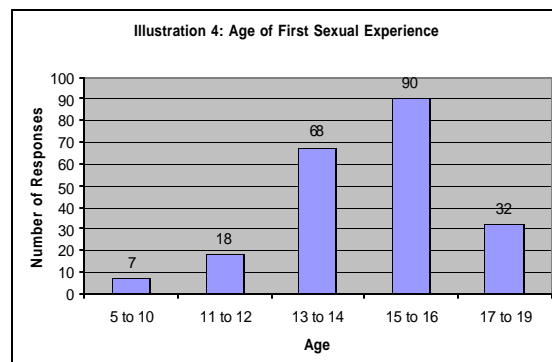
education, only 274 actually receive RSH information from these sources (see Table 2), a difference of 10.9%. Similarly, 14.3% of students believe that health professionals should be responsible for educating them, while only 5.1% of students actually receive information from this source. In contrast, a greater proportion of students receive RSH information from friends and the media than those who believe this source should be responsible for RSH education. Table 2 describes where students receive general information about RSH, as well as information specifically about family planning. Note that only 268 students (48.6%) responded that they have received information about family planning.

Family is a crucial factor in students' level of knowledge about RSH; 336 students, or 60.9%, responded that they converse with their parents about RSH. Monthly income is a statistically significant factor ($P < 0.05$) for determining whether or not families talk about RSH; families with high levels of income are more likely to converse with their children about RSH than families with low levels of income. Illustration 3 details the reasons why 39.1% of students and families do not talk about RSH.



Family planning

The majority of the students surveyed (59.3%) have not had their first sexual experience, as defined by each student. Of those who have (40.7%), the average age of their first experience is 14.58 years, see Illustration 4 for details.



Gender is a statistically significant factor ($P < 0.05$) for predicting the age of first sexual experience; female students are more likely than male students to wait to have their first sexual experience.

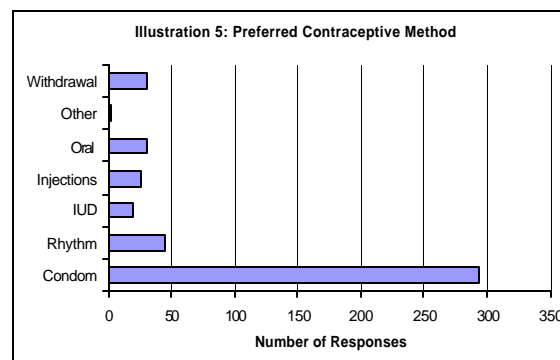
When asked their "ideal number of children", the average response was 2.06 children, with a minimum of zero, a maximum of 15, a median and mode of two. Slightly over half of the students wanted two children, while nearly a quarter wanted three.

Five hundred thirty-five students (96.9%) responded that they knew of some method of birth control. A slightly lower number, 448 students (81.5%) responded that they use, had used, or would use some method of contraceptives. Gender is a statistically significant factor in the decision to use birth control. Female students were less likely to use contraceptives than male students ($P < 0.05$), citing reasons such as fear of side effects and the desire to have children. Nearly half of those who responded that they would not use birth control justified that response with a fear of side effects. Forty percent of respondents did not know why they would not use contraceptives and slightly over 10% said they would not use birth control because they wanted to have children.

Of students who have used, do use, or would use birth control, the condom is the preferred method, followed by the rhythm method, withdrawal, and oral contraceptives. Illustration 5 details the results.

Sexually transmitted infections

Only 62 students (11.2%) had undergone a physical exam to diagnose sexually transmitted infections (STIs), with gender and age of first sexual experience being statistically significant factors for having



undergone an exam. Male students and sexually active students were more likely than female students or non-sexually active students to have had a physical exam to diagnose STIs ($P < 0.05$ in both cases). Only 17.8% of sexually active students had undergone this type of physical exam.

Nearly all students (97.8%) had heard of some STI. Age is a statistically significant factor ($P < 0.05$, using the Fisher exact test) for predicting if students had heard of any STI. Students older than 17 years of age were more likely to have heard of a STI, compared to students younger than 17. Though most students had heard of a STI, many did not know how to prevent them or how they are passed from one person to another. Table 3 details responses to the question, "How can you contract a STI without having sex?"

Nearly 10% of students responded that oral contraceptives provide protection from STIs and HIV/AIDS. Nearly one quarter (24.8%) believe that HIV/AIDS can be passed through everyday contact with the saliva or sweat of an infected person.

Table 2. Where do you receive information about RSH?

	General RSH Information	Percentage of Total	Family Planning Information	Percentage of Total
Friends	13	2.36%	4	1.49%
High School	78	14.13%	62	23.13%
Church	4	0.72%	9	3.36%
Media	83	15.04%	33	12.31%
None	7	1.27%	N/A	N/A
Other	3	0.54%	2	0.75%
Parents	62	11.23%	47	17.54%
Parents and High School	274	49.64%	77	28.73%
Health Professionals	28	5.07%	34	12.69%
Total	552	100.00%	268	100.00%

Table 3. How can you contract STIs without having sex?

	Number of Responses	Percentage
Kisses/Handshakes	25	4.53%
Intimate Physical Contact	90	16.30%
Contact with Infected Objects	52	9.42%
Syringes/Injections	250	45.29%
Unknown	14	2.54%
Other	3	0.54%
Blood	118	21.38%
Total	552	100.00%

Exactly half of the students responded that they knew how to correctly use a condom, and nearly half (49.8%) responded that they would be embarrassed to buy a condom, while 23.4% would be embarrassed to use one. Gender and sexual experience are statistically significant factors ($P < 0.05$) for feeling embarrassed to buy a condom. Female students and those who had not yet had their first sexual experience were more likely to be embarrassed to buy and/or use a condom than male students or those who had had their first sexual experience.

Domestic violence

During the month prior to the study, physical or verbal aggression occurred in 20.8% of students' homes. Adolescents who have witnessed domestic violence are more likely to be involved in a violent relationship in the future, as are those involved in a relationship with an unequal distribution of power. Two questions asked students in an intimate relationship who was responsible for making decisions about physical intimacy and family planning. The majority responded that neither partner makes these decisions.

Another interesting component of this power dynamic in a relationship is the likelihood of young people to say no to a partner requesting sex. In this study, 23.4% of students believe that it is not okay to refuse to sex under any circumstance, 27.6% believe

that it is okay at any time, and the other 49.0% believe that it depends on the situation.

DISCUSSION

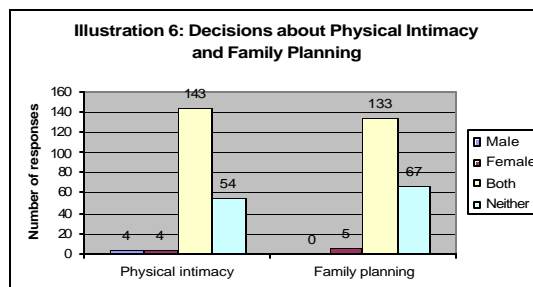
The results of this study confirm data found in other studies, primarily that "sexuality and fertility are some of the severest taboos" (3) and that "adolescents lack sources of reproductive and sexual health education. Also, mothers and fathers do not respond to their adolescents' questions about sexuality because of embarrassment and a lack of knowledge" (3). The findings that most specifically support these statements are that:

- under half of students responded that they had received information about family planning,
- approximately 40% of students do not converse with their parents about RSH,
- half of students said they would be embarrassed to purchase a condom, and
- approximately two-thirds of students in a relationship respond that neither they, nor their partners, make decisions regarding physical intimacy or family planning.

This last point is particularly important because open conversation, along with accurate information, is critical to enjoying healthy and safe relationships.

Female students, more than male students, seem to bear the burden of this lack of information and access to quality RSH. For instance, the fact that the majority of students with children are male is because pregnant students lack the support from administrators and teachers necessary to stay in school. Strong social taboos also dictate that pregnant adolescents drop out of school in order to raise the child. Further, females tend to be the victims of both sexual abuse and domestic violence. Though sexual abuse was not directly studied, the young ages at which some students had their first sexual experience (ages 5 to 12, for instance) suggest that these relationships may not have been consensual. The levels of domestic violence cited by the students are most likely underestimates of reality, as aggression or violence may have occurred without the student's realization, or in the month before the study.

It is difficult to compare this study's findings to similar quantitative data because very few studies have focused on the RSH of adolescents in Ecuador. In comparison with the studies of Francisco Sevilla and Nelson Oviedo Valdivieso, the students in this study tend to have a higher level of knowledge about RSH issues, particularly family planning and STIs. Perhaps this can be explained with a difference of one to two years between the studies, but it seems more probable that results differed because of a difference in sample diversity. These authors studied the entire country, while this study focused on the relatively small



geographic area of Valle de los Chillos.

The author would like to note that in the original study, a number of students, as well as high school teachers from these schools and market vendors from the same area participated in in-depth interviews about the same four RSH variables addressed in the surveys. The results of these interviews are not included in this paper, due to sampling concerns and space constraints, but did add richness and understanding to the study that cannot be conveyed through strictly quantitative methods. Though addressing these topics through qualitative methods is difficult due to the intensity of the social taboos surrounding RSH, future research could involve focus groups, interviews, or ethnographies, in order to paint a more nuanced picture of the RSH challenges facing this population.

CONCLUSION

This study makes it clear that adolescents in the Valle de los Chillos, Ecuador, suffer from a poor quality of reproductive and sexual health, measured in terms of RSH education and information about RSH, family planning, sexually transmitted infections, and domestic violence. Despite the efforts of many organizations and individuals, misunderstandings about RSH persist and, coupled with inadequate support systems for these students, negatively impact their quality of life. The solution with the greatest potential to impact the concern of poor RSH is also the most complicated: to minimize the social taboos surrounding RSH and open avenues of communication to enable students to obtain necessary information.

Education programs that address RSH should not only involve adolescents, but also must be directed towards the parents and teachers, who often lack accurate information. Parents and teachers should also be taught various ways to approach the topic and stimulate fruitful discussion. Because we have seen that females often bear the greatest burden due to a lack of understanding about RSH, programs designed to address the RSH in this population must be aware of and prepared to address this disparity. For instance, supportive and educational services should be provided to pregnant adolescents, their families, and their schools, in order to enable these women to continue their education. Further, a community center must also provide educational and psychological services for teen victims of sexual abuse and/or domestic violence.

Though this study found a number of areas in which the students lack accurate information, and any presentation of basic information about family planning methods, sexually transmitted infections, and domestic violence would be an improvement on the current level of knowledge, the following three recommendations

address the most pressing areas of concern:

1. Present information about family planning methods that do not have significant side effects. For those methods that do cause side effects, provide statistics about the number of users that experience these side effects, as well as the severity of these reactions.
2. Clarify how sexually transmitted infections can be prevented and how they are passed between people. Describe symptoms of common STIs and emphasize that all sexually active students should receive exams to check for STIs, regardless of the presence of symptoms.
3. Promote self respect and respect between partners to enable more open discussion about RSH issues within the context of an intimate relationship. Stress the importance of discussing issues related to physical intimacy and family planning.

Addressing these topics through consistent, open communication between students, teachers, and families will be the most effective method of addressing the poor quality of RSH in this population.

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